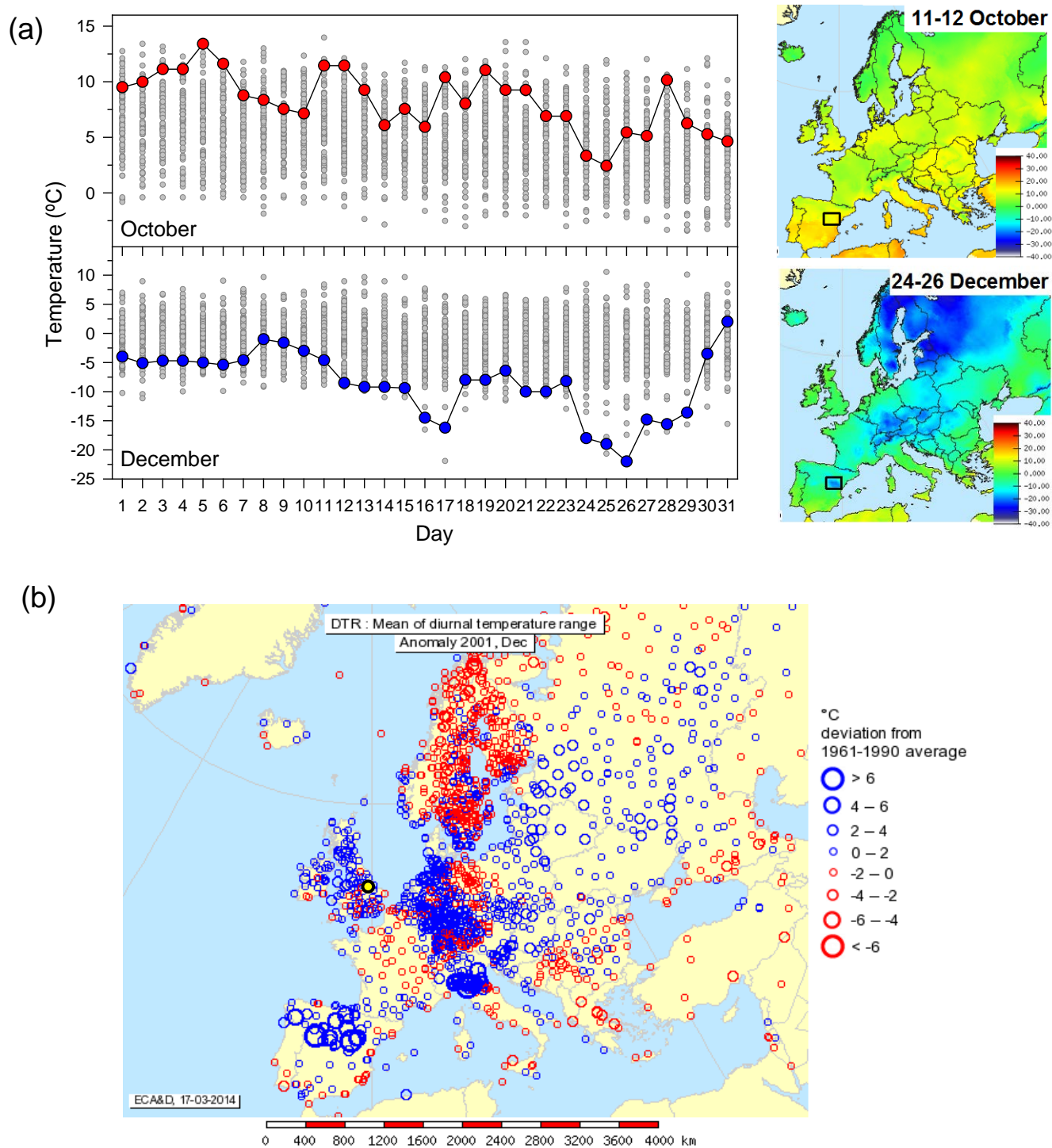
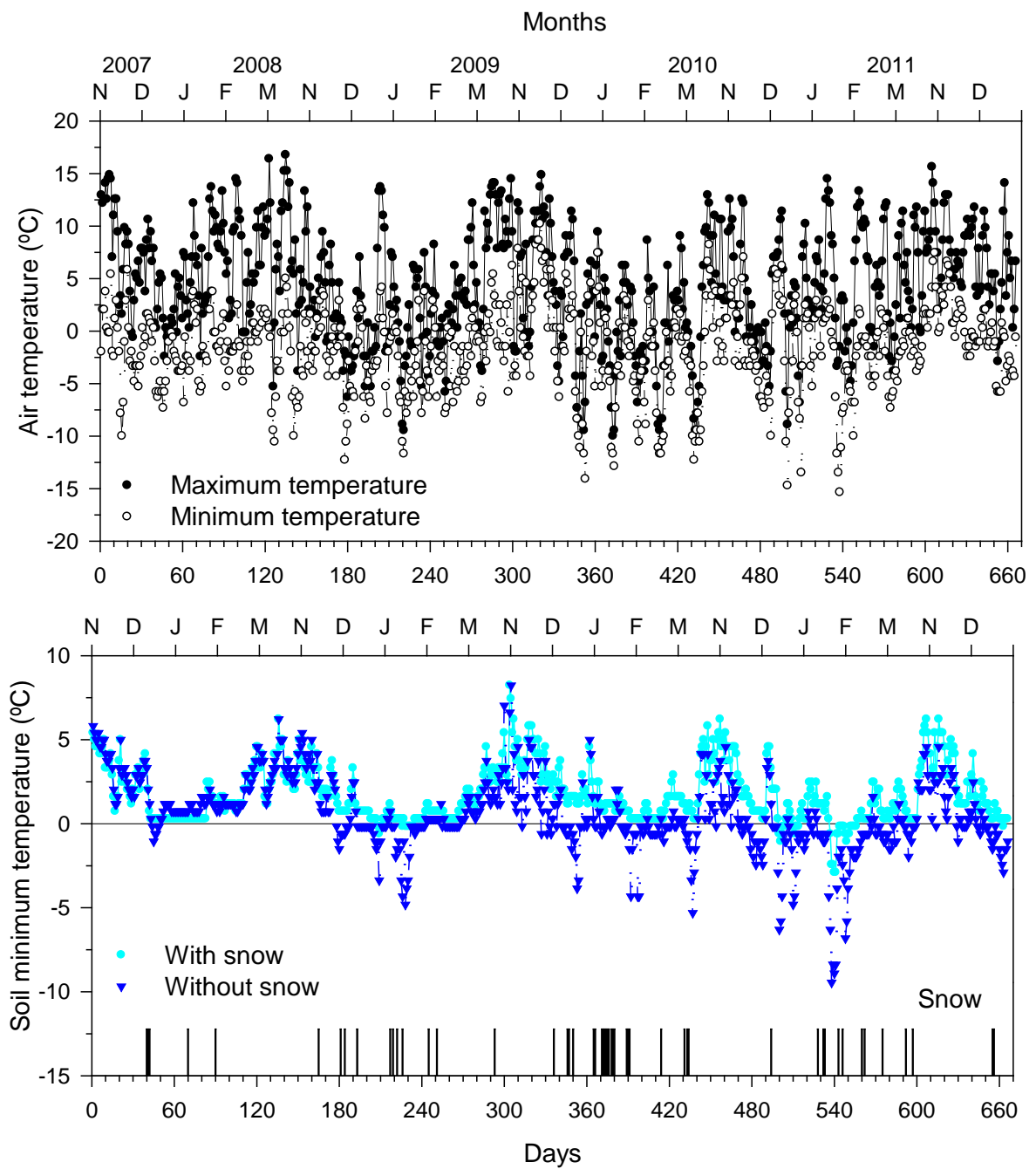


## SUPPLEMENTARY DATA

**Figure S1.** Daily temperatures recorded in the Teruel station during October and December 2001 (color symbols) as compared with the rest of the record (grey symbols, period 1950-2004) and (b) mean diurnal temperature range for December 2001 expressed as anomalies or deviations from the 1961-1990 average recorded in a network of European meteorological stations (the symbol indicates the study area). The maps were built using the <http://www.ecad.eu/> tools based on the E-OBS gridded climate dataset ver. 10.0.



**Figure S2.** Effects of snow removal on soil minimum temperatures at the study site as related to air temperatures recorded from November to March from 2007 to 2011. In the lowermost plot the vertical bars indicate periods with snow depth higher than 10 cm.



**Table S1.** Characteristics of local meteorological stations used to build the regional mean series.

Station	Latitude (N)	Longitude (W)	Elevation (m a.s.l.)	Annual precipitation (mm)	Period (missing data %)	Annual mean temperature (°C)	Period (missing data %)
Rubielos de Mora	40° 11'	0° 39'	949	628	1955-1997 (2.7)	–	–
Rubielos de Mora-DGA	40° 12'	0° 39'	950	492	1993-2004 (2.0)	–	–
Mora de Rubielos	40° 15'	0° 45'	1039	467	1948-1981 (5.6)	–	–
Mora de Rubielos-DGA	40° 15'	0° 45'	1040	453	1991-2004 (6.1)	12.0	1991-2004 (5.0)
Alcalá de la Selva	40° 21'	0° 42'	1400	558	1942-2004 (8.7)	9.6	1987-2004 (10.2)
Teruel Escuela Normal	40° 21'	1° 06'	915	380	1968-1985 (6.0)	11.5	1968-1985 (6.5)
Teruel Instituto	40° 21'	1° 06'	916	379	1900-1967 (41.6)	11.7	1900-1967 (24.6)
Teruel La Salle	40° 21'	1° 06'	934	–	–	11.4	1951-1974 (43.4)
Teruel	40° 21'	1° 07'	900	379	1986-2004 (1.1)	12.1	1986-2004 (0.4)
Teruel “Obras Públicas”	40° 21'	1° 09'	900	457	1948-1990 (2.0)	11.9	1948-1990 (4.9)
Teruel “El Chantre”	40° 22'	1° 08'	900	261	1986-1994 (15.7)	–	–
Mosqueruela	40° 22'	0° 27'	1510	665	1992-2004 (5.1)	9.9	1992-2004 (1.1)
Gúdar	40° 27'	0° 43'	1587	451	1953-1987 (11.0)	–	–
Fortanete	40° 30'	0° 31'	1408	650	1929-1965 (52.3)	–	–
Villarroya de los Pinares	40° 32'	0° 40'	1320	513	1990-2004 (0.5)	9.2	1990-2004 (1.0)
Aliaga	40° 40'	0° 42'	1115	458	1989-2004 (5.2)	10.2	1989-2004 (8.2)